

WHAT IS CLAIMED IS:

1. A data processing network, comprising:

5 a first server connected to a central switch;

a second server connected to the switch, wherein the second server includes a network interface card (NIC) enabled to receive management protocol data units (PDUs) from the first server and application PDUs from an external network; and

10 wherein the NIC is configured to interpret priority information in the management and application PDUs and enabled to prioritize interrupts to a host processor of the second server based upon the priority information.

15 2. The network of claim 1, wherein the second server includes a host processor connected to a network interface card and wherein the second server is configured to buffer the management PDUs and application PDUs in a buffer on the NIC.

20 3. The network of claim 1, wherein the second server is further configured to generate application PDUs destined for the external network and management PDUs destined for the first server responsive to the received PDUs.

4. The network of claim 3, wherein the management PDUs are generated at a low level of the network's communication protocol stack.

25 5. The network of claim 4, wherein the communication protocol stack comprises a TCP/IP protocol stack and further wherein the application PDUs comprise TCP/IP PDUs and the management PDUs are generated at a data link level of the stack.

30 6. The network of claim 1, wherein the priority information is included in an IEEE 802.1q compliant header of the PDUs.

7. The network of claim 1, wherein the second server is configured to grant higher priority to application PDUs than management PDUs.

5 8. The network of claim 7, wherein the second server NIC is configured to buffer management PDUs until a management PDU interrupt is issued.

9. The network of claim 8, wherein the second server NIC is further configured to issue a management PDU interrupt after detecting an absence of management PDU activity for a
10 predetermined interval.

10. The network of claim 1, wherein the second server comprises a server appliance and wherein
the network further includes a plurality of additional server appliances each attached to the
switch.

15 11. The network of claim 10, wherein the first server comprises a management server enabled to
manage each of server appliances.

12. A method of handling protocol data units (PDUs) in server appliance of a data processing
20 network, comprising:

receiving an application PDU from an external network and buffering the application
PDU;

25 interpreting priority information contained in the application PDU;

receiving a management PDU from a management server of the data processing network
and buffering the management PDU;

30 interpreting priority information contained in the management PDU; and

prioritizing interrupts to a host processor of the server appliance based upon the priority information.

13. The method of claim 12, wherein receiving an application PDU comprises receiving a TCP/IP formatted application PDU receiving the management PDU comprises receiving a low level management PDU.

14. The method of claim 12, wherein interpreting priority information includes identifying priority bits in a data link header of the received PDUs wherein the header is compliant with IEEE 802.1q.

15. The method of claim 12, further comprising interrupting the host processor with a first interrupt to service the application PDUs and interrupting the host processor with a second interrupt to service the management PDUs.

16. The method of claim 15, wherein prioritizing the host processor interrupts includes granting higher priority to the applications PDUs than to the management PDUs.

17. The method of claim 16, wherein interrupting the host processor to service the management PDUs includes interrupting the host processor responsive to detecting an absence of application PDU activity for a predetermined duration.

18. A server appliance suitable for use in a data processing network, comprising:

a host processor connected to a host memory;

a network interface card (NIC) connected to the host processor and enabled to connect to and communicate with a central switch of the data processing network;

wherein the NIC is further configured to interpret priority information contained in application protocol data units received from an external network and in management

PDUs received from a management server connected to the switch, and wherein the NIC is further configured to prioritize interrupts to the host processor based upon the priority information in the received PDUs.

5 19. The server appliance of claim 18, wherein the server appliance is further configured to generate application PDUs destined for the external network and management PDUs destined for the first server responsive to the received PDUs.

10 20. The server appliance of claim 19, wherein the management PDUs are generated at a low level of the network's communication protocol stack.

15 21. The server appliance of claim 20, wherein the communication protocol stack comprises a TCP/IP protocol stack and further wherein the application PDUs comprise TCP/IP PDUs and the management PDUs are generated at a data link level of the stack.

22. The server appliance of claim 18, wherein the server appliance is configured to grant higher priority to application PDUs than management PDUs.

20 23. The server appliance of claim 22, wherein the server appliance NIC is configured to interrupt the host processor on each received application PDU and to buffer management PDUs until a management PDU interrupt is issued.

25 24. The server appliance of claim 23, wherein the server appliance NIC is further configured to issue a management PDU interrupt after detecting an absence of management PDU activity for a predetermined interval.